

ATTACHMENT B. METHODOLOGY USED IN ESTIMATING ACCESS MINUTES FOR THE POOLED, CROSS-SECTION, TIME SERIES MODEL

1. For the pooled, cross-section time series model, I begin with the total access minutes for each state as described in Attachment A. In order to perform these regressions, I also need variables to control for differences across states. I obtain data from the Survey of Current Business on per capita personal income. I also obtained from Verizon data on the total number of billable access lines at the end of the year for each of the states.

2. In order to make the per capita personal income comparable across time, I adjust it for inflation by dividing current per capita income by the Consumer Price Index as reported in the *Economic Report of the President*. Quarterly estimates of access lines are interpolated from data on access lines at the end of each year (1997, 1998, and 1999) for Verizon and the CLECs. I also include the number of equivalent business days for each quarter in the analysis to control for differences across quarters as to the number of weekdays and holidays, which impacts the volume of long distance traffic. The data on equivalent business days was obtained from Verizon. The number of state population weighted heating degree days as reported by the National Climatic Data Center¹ is also included in order to control for adverse weather in the state.

3. I created several dummy variables to control for characteristics unique to New York and the other states in Verizon's region (NY, DE, MA, MD, ME, NH, NJ, PA, RI, VA, VT,

¹ U.S. Department Of Commerce, National Oceanic And Atmospheric Administration, National Environmental Satellite, Data, And Information Service, Historical Climatology Series 5-1, Monthly, State, Regional, And National Heating Degree Days, Weighted By Population (Includes Aerially Weighted Temperature And Precipitation) Period: July 1997 Through June 1999 Date Published: January 2000.

WV, and DC). These dummy variables help account for differences across the states that are not picked up by the access lines and real per capita income. I also created separate dummy variables for each of the four quarters of the year to account for variations in line use over a year. Finally, I created two dummy variables to capture the unique events in New York in the first and second quarters of 2000.

4. For this analysis, I estimated an ordinary least squares regression of the growth in minutes per line:

$$(M_{it}/L_{it}) / (M_{i,t-4}/L_{i,t-4}) = a + b(Y_{it}/Y_{i,t-4}) + cD_i + dT_t + e(W_{it}/W_{i,t-4}) + f(BD_t/BD_{t-4}) + g(L_{it}/L_{i,t-4}) + h(NY-2000(I)) + i(NY-2000(II)) + u_{it}$$

where (M_{it}/L_{it}) is the number of minutes in the i th state in period t , M_{it} , divided by the number of lines in the i th state in period t , L_{it} ; $(M_{i,t-4}/L_{i,t-4})$ is the same measure four quarters earlier; Y_{it} is per-capita income in the i th state in quarter t ; D_i is a dummy variable equal to one if the observation is from the i th state and zero otherwise; T_t is a dummy variable equal to unity if the observation is from quarter t and zero otherwise;² W_{it} is a measure of adverse days of weather in the i th state in the quarter t ; BD_t is the number of available (non-holiday) business days in quarter t ; $NY-2000(I)$ and $NY-2000(II)$ are two dummy variables equal to unity if the observation is from New York in the first or second quarter 2000, respectively, and zero otherwise; and u_{it} is a random disturbance term.

5. The estimates of the coefficients a through i for the regression equation are shown in Table B.1.

² One state dummy variable and one seasonal variable are omitted because of the presence of a constant term in the regression.

TABLE B.1. REGRESSION RESULTS FOR THE YEAR TO YEAR CHANGE IN INTERLATA ACCESS MOUS

Variable	Coefficient	t-statistic
NY-2000(I)	0.07	2.21**
NY-2000(II)	0.06	1.88*
W – Heating Degree Days	0.00	4.57***
BD – Equivalent Business Days	0.04	3.51***
L – Lines	(0.86)	(1.69)*
Y –Income	(0.22)	(0.57)
Delaware	0.01	0.40
Massachusetts	(0.02)	(1.19)
Maryland	0.03	1.58
Maine	0.01	0.64
New Hampshire	(0.03)	(1.90)*
New Jersey	(0.02)	(1.41)
New York	(0.06)	(2.97)***
Pennsylvania	(0.03)	(1.92)*
Rhode Island	(0.01)	(0.42)
Virginia	0.01	0.81
Vermont	(0.02)	(1.18)
West Virginia	0.05	2.85***
2 nd Quarter	0.05	2.83***
3 rd Quarter	0.05	2.74***
4 th Quarter	0.02	2.23**
Constant	(0.00)	(0.00)
R-squared	0.67	
Adjusted R-squared	0.54	

Notes: *significant at the 90 percent confidence level

**significant at the 95 percent confidence level

***significant at the 98 percent confidence level



C

REPLY DECLARATION OF
ROBERT W. CRANDALL

ATTACHMENT C

ATTACHMENT C. METHODOLOGY USED IN CALCULATING CONSUMER BENEFITS

1. In order to calculate the benefits to consumers, I assume that the elasticity of demand is -0.7, a value consistent with recent studies of demand for long distance services. I also assume that the price of long-distance service in New York was the same as the national average interstate revenue per minute of \$0.11 as reported in the FCC Trends in Telephone Service.¹ Using these values and the equation for elasticity of demand, I then calculate the estimate for the current average revenue per minute in New York, given the changes in the quantity of minutes consumed during the first six months of 2000. That is, I solve for the equation below for P_2

$$-0.7 = ((Q_2 - Q_1)/Q_1) / ((P_2 - P_1)/P_1) \quad \text{Eqn. 1}$$

Where Q_2 are conversation minutes with Verizon's entry; Q_1 are conversation minutes without Verizon entry; P_1 is the price per minute without Verizon's entry; and P_2 is the price per minute with Verizon's entry. Solving for P_2 , I get a new price of \$0.099 per minute. I then use this result and the other data to solve for the consumer benefit using the following equation:

$$\text{Benefit} = (Q_1) * (P_1 - P_2) + \frac{1}{2}(P_1 - P_2)(Q_2 - Q_1) \quad \text{Eqn. 2}$$

This results in a consumer benefit of approximately \$113 million for the first half of 2000.

¹ FEDERAL COMMUNICATIONS COMMISSION, COMMON CARRIER BUREAU, INDUSTRY ANALYSIS DIVISION, 2000 TRENDS IN TELEPHONE SERVICE REPORT (MARCH 2000).



**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Application by Verizon New England)	
Inc., Bell Atlantic Communications,)	
Inc. (d/b/a Verizon Long Distance),)	CC Docket No. 00-176
NYNEX Long Distance Company)	
(d/b/a Verizon Enterprise Solutions),)	
and Verizon Global Networks Inc., for)	
Authorization To Provide In-Region,)	
InterLATA Services in Massachusetts)	

REPLY DECLARATION OF STEVEN E. COLLINS

1. My name is Steven E. Collins. My business address is 1310 North Court House Road, 5th Floor, Arlington, Virginia. I am a Manager in the Finance organization. In that capacity, I am responsible for business planning analysis.

2. I have more than 21 years experience in the telecommunications industry, in a variety of positions for C&P Telephone, Bell Atlantic and now Verizon. Prior to my current position, I worked in Business Research and a variety of positions in External Affairs. I received a Bachelor of Science degree in Mathematics from the College of William & Mary and a Master of Business Administration degree in Management from Golden Gate University.

3. The purpose of my declaration is to demonstrate that the unbundled switching, transport and port rates that Verizon New England (Verizon) filed on October 13, 2000 with the Massachusetts Department of Telecommunications and Energy (DTE) are comparable to rates that are in effect in New York.

I. The October 13, 2000 Tariff Filing.

4. On October 13, 2000, Verizon revised its unbundled switching, transport and port rates. Attachment A is a copy of the October 13, 2000 filing. As explained in the October 13, 2000 filing, Verizon proposed “these reductions to eliminate pricing issues particularly regarding local switching in its Section 271 application now pending before the FCC. The effect of this filing is to make the Massachusetts rates equivalent to the rates for Verizon NY, which the FCC previously approved in the New York 271 proceeding.”

5. Specifically, Verizon reduced both its peak and off-peak local switching rates in all density zones except for the Metro zone. The percentage reductions were substantial, ranging from 36% to 77%. Verizon also reduced its unbundled transport rates between 25% and 59%. Finally Verizon reduced its line port charge from a weighted average of approximately \$4.62 per month to the current rate of \$2.00 per month, approximately 57%. The actual unbundled switching, transport and port rates are contained in Attachment C.

6. The Massachusetts DTE approved these rates and Verizon’s request that they become effective immediately. On October 18, 2000, Verizon filed revisions to the tariff which made the rates effective as of October 13 and corrected an error in the initial filing. A copy of the October 18 filing is Attachment B. In its Comments in this proceeding, the DTE stated, “The rates in this tariff are not identical to the switching, transport, and port costs currently in effect for VZ-NY, due to differences in rate structure, but the resulting switching, transport, and port costs for CLECs are virtually identical to those same costs for New York, which the FCC already found to be

reasonable and in compliance with TELRIC in the Bell Atlantic New York Order. The filing and approval of this tariff should put to rest any arguments that UNE rates in Massachusetts are not TELRIC-compliant.” DTE Evaluation at 343.

II. Verizon’s Unbundled Switching, Transport and Port Rates in Massachusetts are Comparable to the Rates in New York.

7. The rate structures in Massachusetts and New York differ. Verizon has four different density zones for unbundled local switching and other elements in Massachusetts, but only one in New York. Massachusetts has two time of day periods (peak and off-peak), while New York has three (day, evening and night). Thus, it would have been impossible for Verizon to just adopt the New York rates, as is, in Massachusetts. In developing new rates, Verizon strove to set rates for unbundled local switching, transport, and analog line ports that, when combined, were comparable to rates for those three elements, in combination, in New York. Attachment C is Verizon’s analysis comparing the rates in New York and Massachusetts.

8. As indicated previously, for Massachusetts and New York, UNE Switching rates vary by time of day. Massachusetts has two time of day periods. The peak period is from 9 a.m. to 9 p.m. Monday to Friday. All other times are considered off-peak. New York has three time of day periods: day, evening and night. In addition, the hours of the time of day periods are different in LATA 132 (the LATA for New York City and surrounding areas) than they are in the rest of the state. The time of day periods for New York are set out below:

	<u>LATA 132</u>	<u>All Other LATAs</u>
Day:	8AM – 9PM (Monday-Friday)	8AM – 5PM (M-F)
Evening:	9PM – 11PM (Monday-Friday)	5PM – 11PM (M-F)
Night:	All other times	All other times

Approximately 75% of Verizon's New York access lines are in LATA 132. Since the day period in LATA 132 is approximately the same as the Massachusetts peak period, the day period in New York was considered to be comparable to the peak period in Massachusetts.

9. End of year 1999 access lines by wire center along with the current assignment of wire centers to density zones were used to estimate the percentage of total access lines by density zones. These percentages are set out in Attachment C.

10. Verizon used a figure of approximately *** *** originating and terminating minutes of use (MOU) per line per month. This figure was chosen after reviewing the results of the Dial Equipment Minutes (DEM) analysis. In order to compare the weighted average local switching rate to the other switching components on a per MOU basis, it is necessary to divide the other rates/revenues per line by the billable local switching MOUs. The billable local switching MOUs differ from the assumed MOUs because some MOUs are not billed at the local switching rate. For example, the analysis removes terminating intraswitch MOUs since both the Massachusetts DTE and the New York PSC preclude Verizon from charging both the originating and terminating local switching rate for intraswitch calls. Our information indicates that there are more of these MOUs in Massachusetts than in New York. We assumed *** *** average billable local switching MOUs per line per month in New York, and *** *** in Massachusetts.

11. Some of the rates included are charged per minute (i.e., local switching), while others are charged per month (i.e., line port) and others are charged per call (i.e., customer usage detail). Therefore, to compare the combination of the three rates in

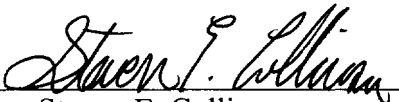
Massachusetts to that in New York we had to convert all of the rates into a per minute charge.

12. We determined the transport rate on a per minute basis in both New York and Massachusetts by dividing the transport revenue per line by the average billable local switching MOUs per line. Similarly, we determined the line port rate on a per minute basis in both states by dividing the line port revenue per line by the estimated average billable local switching MOUs per line. For New York, we determined the customer usage detail revenue on a per minute basis by dividing an estimate of the average customer usage detail revenue per line by the estimated average billable local switching MOUs per line. Customer usage detail is not charged separately in Massachusetts.

13. Under our assumptions, in New York, the total of the weighted average local switching rate plus the transport and line port on a per minute basis equals \$0.006802. The combination of the same three elements in Massachusetts is also \$0.006802.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on November 2, 2000


Steven E. Collins

REPLY DECLARATION OF
STEVEN E. COLLINS

ATTACHMENT A

TT00-82

October 13, 2000

Department of Telecommunications & Energy
Commonwealth of Massachusetts
One South Station, Fl. 2
Boston, MA 02110

ATTENTION: Senior Rate Analyst

We are hereby filing as of October 13, 2000, for effect November 12, 2000, tariff material consisting of the following:

(DTE--MA--No. 17)

<u>Part</u>	<u>Section</u>	<u>Revision of Page(s)</u>
Part M	2	4, 7, 12, 13 and 14

Verizon MA proposes in this filing to reduce substantially the Department-approved rates for analog line ports and local switching and transport usage rates. The current rates were set by the Department using the FCC's TELRIC methods and meet the pricing standard in Section 252(d) of the Telecommunications Act. Verizon MA is, however, proposing these reductions to eliminate pricing issues particularly regarding local switching in its Section 271 application now pending before the FCC. The effect of this filing is to make the Massachusetts rates equivalent to the rates for Verizon NY, which the FCC previously approved in the New York 271 proceeding.

Since the filing provides for only rate reductions and prejudices no carrier, Verizon MA requests that the Department approve this filing immediately and permit Verizon MA to implement the changes in less than the 30 day statutory notice period.

Department of Telecommunications & Energy
October 13, 2000
Page 2

Attached are the necessary copies of the tariff pages, as well as a rate comparison of the present and proposed charges. Please return the copy with your stamp of receipt.

Respectfully submitted,

President - Massachusetts

		DTE Approved Rates	Verizon Proposed Rates
Billing Element	Density/Time of Day		
Local Switching - Peak	Metro	\$0.004647	\$0.004647
	Urban	\$0.007401	\$0.004724
	Suburban	\$0.009549	\$0.004724
	Rural	\$0.014277	\$0.004724
Local Switching - Off-Peak	Metro	\$0.001872	\$0.001872
	Urban	\$0.003516	\$0.001872
	Suburban	\$0.005282	\$0.001872
	Rural	\$0.008186	\$0.001872
Unbundled Shared Trunk Port - Peak	Metro	\$0.001703	\$0.000866
	Urban	\$0.001820	\$0.000866
	Suburban	\$0.002090	\$0.000866
	Rural	\$0.002093	\$0.000866
Unbundled Shared Trunk Port - Off-Peak	Metro	\$0.000379	\$0.000189
	Urban	\$0.000404	\$0.000189
	Suburban	\$0.000464	\$0.000189
	Rural	\$0.000465	\$0.000189
Tandem Switching	Peak	\$0.001586	\$0.001190
	Off-Peak	\$0.001134	\$0.000851
Tandem Trunk Port	Peak	\$0.003528	\$0.002646
	Off-Peak	\$0.000784	\$0.000588
Unbundled Tandem Transport	Peak	\$0.001780	\$0.001335
	Off-Peak	\$0.000400	\$0.000300
Tandem Transit Switching	Peak	\$0.008642	\$0.006482
	Off-Peak	\$0.002702	\$0.002027
Unbundled Local Common Transport	Peak	\$0.003745	\$0.002201
	Off-Peak	\$0.000836	\$0.000489
Unbundled Toll Common Tandem Transport	Peak	\$0.005829	\$0.003764
	Off-Peak	\$0.001457	\$0.000954
Unbundled Telephone Company Reciprocal Compensation – Peak	Metro	\$0.006350	\$0.005924
	Urban	\$0.009221	\$0.005477
	Suburban	\$0.011639	\$0.005477
	Rural	\$0.016370	\$0.005477
Unbundled Telephone Company Reciprocal Compensation - Off-Peak	Metro	\$0.002251	\$0.002156
	Urban	\$0.003920	\$0.002323
	Suburban	\$0.005746	\$0.002323
	Rural	\$0.008651	\$0.002323
Unbundled TC Reciprocal Compensation - Peak	Metro	\$0.016772	\$0.013741
	Urban	\$0.019643	\$0.013294
	Suburban	\$0.022061	\$0.013294
	Rural	\$0.026792	\$0.013294
Unbundled TC Reciprocal Compensation – Off-Peak	Metro	\$0.005353	\$0.004483
	Urban	\$0.007022	\$0.004650
	Suburban	\$0.008848	\$0.004650
	Rural	\$0.011753	\$0.004650

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 Part M Section 2
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Verizon New England Inc.

2. Rates and Charges
 2.4 Tandem Switching

ID	Service Category	Rate Element	Rate	USOC
	Dedicated Tandem Trunk Ports	Monthly - Per port	297.00	U4T
	TOPS Trunk Ports	Monthly - Per port	313.85	UOS

ID	Service Category	Rate Element	Rate	USOC
	Shared Tandem Trunk Ports	Peak - Per minute of use	.002646	(C)
		Off Peak - Per minute of use	.000588	(C)

ID	Service Category	Rate Element	Rate	USOC
	Tandem Switch Usage	Peak - Per minute of use	.001190	(C)
		Off Peak - Per minute of use	.000851	(C)

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Robert Mudge
 President-MA

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Verizon New England Inc.

2. Rates and Charges
2.6 Local Switching

ID	Service Category	Rate Element	Rate	USOC
	Line Ports	Analog - Metro - Monthly - Per port	2.00	(C)
		Analog - Urban - Monthly - Per port	2.00	
		Analog - Suburban - Monthly - Per port	2.00	
		Analog - Rural - Monthly - Per port	2.00	(C)
		Basic Rate ISDN - Metro - Monthly - Per port	48.54	
		Basic Rate ISDN - Urban - Monthly - Per port	31.13	
		Basic Rate ISDN - Suburban - Monthly - Per port	34.94	
		Basic Rate ISDN - Rural - Monthly - Per port	26.88	
		Primary Rate ISDN - Metro - Monthly - Per port	609.58	
		Primary Rate ISDN - Urban - Monthly - Per port	471.64	
		Primary Rate ISDN - Suburban - Monthly - Per port	583.35	
		Primary Rate ISDN - Rural - Monthly - Per port	583.35	
		Integrated Digital Loop Carrier Port - Metro - Monthly - Per interface group (4 DS1 ports)	371.16	
		Integrated Digital Loop Carrier Port - Urban - Monthly - Per interface group (4 DS1 ports)	481.08	
		Integrated Digital Loop Carrier Port - Suburban - Monthly - Per interface group (4 DS1 ports)	438.24	
		Integrated Digital Loop Carrier Port - Rural - Monthly - Per interface group (4 DS1 ports)	767.24	

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President-MA

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Verizon New England Inc.

2. Rates and Charges

2.6 Local Switching

ID	Service Category	Rate Element	Rate	USOC
	Unbundled Shared Trunk Port	Metro - Peak - Per MOU	.000866	
		Metro-Off Peak - Per MOU	.000189	
		Urban - Peak - Per MOU	.000866	
		Urban - Off Peak - Per MOU	.000189	
		Suburban - Peak - Per MOU	.000866	
		Suburban - Off Peak - Per MOU	.000189	
		Rural - Peak - Per MOU	.000866	
		Rural - Off Peak - Per MOU	.000189	

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ID	Service Category	Rate Element	Rate	USOC
	Unbundled Local Switching	Metro - Peak - Per MOU	.004647	
		Metro - Off Peak - Per MOU	.001872	
		Urban - Peak - Per MOU	.004724	
		Urban - Off Peak - Per MOU	.001872	
		Suburban - Peak - Per MOU	.004724	
		Suburban - Off Peak - Per MOU	.001872	
		Rural - Peak - Per MOU	.004724	
		Rural - Off Peak - Per MOU	.001872	
	Unbundled Tandem Transport	Metro - Peak - Per MOU	.001335	
		Metro - Off Peak - Per MOU	.000300	
		Urban - Peak - Per MOU	.001335	
		Urban - Off Peak - Per MOU	.000300	
		Suburban - Peak - Per MOU	.001335	
		Suburban - Off Peak - Per MOU	.000300	

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Verizon New England Inc.

2. Rates and Charges
2.6 Local Switching

ID	Service Category	Rate Element	Rate	USOC
	Unbundled Tandem Transport	Rural - Peak - Per MOU	.001335	
		Rural - Off Peak - Per MOU	.000300	
	Unbundled Local Common Transport	Metro - Peak - Per MOU	.002201	
		Metro - Off Peak - Per MOU	.000489	
		Urban - Peak - Per MOU	.002201	
		Urban - Off Peak - Per MOU	.000489	
		Suburban - Peak - Per MOU	.002201	
		Suburban - Off Peak - Per MOU	.000489	
		Rural - Peak - Per MOU	.002201	
		Rural - Off Peak - Per MOU	.000489	
	Unbundled Toll Common Tandem Transport	Metro - Peak - Per MOU	.003764	
		Metro - Off Peak - Per MOU	.000954	
		Urban - Peak - Per MOU	.003764	
		Urban - Off Peak - Per MOU	.000954	
		Suburban - Peak - Per MOU	.003764	
		Suburban - Off Peak - Per MOU	.000954	
		Rural - Peak - Per MOU	.003764	
		Rural - Off Peak - Per MOU	.000954	
	Tandem Transit Switching	Peak - Per MOU	.006482	
		Off Peak - Per MOU	.002027	
	Unbundled Telephone Company Reciprocal Compensation	Metro - Peak - Per MOU	.005924	
		Metro - Off Peak - Per MOU	.002156	
		Urban - Peak - Per MOU	.005477	
		Urban - Off Peak - Per MOU	.002323	
		Suburban - Peak - Per MOU	.005477	
		Suburban - Off Peak - Per MOU	.002323	

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Verizon New England Inc.

2. Rates and Charges
2.6 Local Switching

ID	Service Category	Rate Element	Rate	USOC
	Unbundled Telephone Company Reciprocal Compensation	Rural - Peak - Per MOU	.005477	(C)
		Rural - Off Peak - Per MOU	.002323	
	Unbundled TC Reciprocal Compensation	Metro - Peak - Per MOU	.013741	
		Metro - Off Peak - Per MOU	.004483	
		Urban - Peak - Per MOU	.013294	
		Urban - Off Peak - Per MOU	.004650	
		Suburban - Peak - Per MOU	.013294	
		Suburban - Off Peak - Per MOU	.004650	
		Rural - Peak - Per MOU	.013294	
		Rural - Off Peak - Per MOU	.004650	(C)

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 President-MA

REPLY DECLARATION OF
STEVEN E. COLLINS

ATTACHMENT B